

CASE STUDY:

Localization Testing- Huge Cost? How to reduce....

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Client:

Our client is a global pioneer in digital marketing and digital media solutions, with more than 100 products supported in more than 24 different locales. The tools and services provided by our client, allow end users to create revolutionary digital content, deploy it across media and devices, measure and optimize it over time, and achieve greater business successes in global market.

Challenges:

Today, the word 'Agile' plays a vital role in the software industry in the development life cycle. Our client follows agile methodology for product development to optimize processes and retain market leadership. In Agile, coding is done iteratively which is often simultaneously tested to be pushed to production within stringent timelines. To test across multiple locales, the timeline remains the same as that of the English product. So, we optimize the test coverage statistically with data from marketing teams, of similar products in market, target users and locales without compromising the quality of the product.

As is the case in Agile where there is continuous development, even patches for released products are often imperative and time sensitive. Ensuring quality of such patches across multiple locales and platforms in another challenge on hand. Apart from these, creation of test data is very essential and is a frequent activity in localization projects where we need to create test data for multiple locales.

In conventional development models, we deploy QA engineers to create test data for “n” number of locales. However, since time is of essence here, the challenge needs to be tackled.

The core challenges we thus had on hand were:

- High cost involved for test data creation and testing frequent patch releases
- Challenge of ramping up the resources with the required product training
- UI testing of the major functional workflows across locales.

Solution:

As a specialist of localization and internationalization testing, QA InfoTech understands the client's needs and provides them an over-arching solution for the challenges in agile development for localization QA.

We created an automated test suite for the client's frequent patch releases and test data creation activity. We recommended a step by step approach, as outlined below, to overcome the discussed challenges:

Steps:

- Thorough understating of the product features and critical functional workflows
- Identification and significance of testing data for testing the product
- Designing intelligent automated test scripts using automation tool to meet the testing requirements

Approach:

Some of the key functions performed by our automation engineers included:

- Acquired in-depth product knowledge; with our knowhow of localization testing practices we created scripts for major functional workflows, which can be executed on any supported locale during functional releases.
- Prepared scripts for the automated test data creation so as to create test data as quickly as possible for different testing scenarios such as performance, e-mail template generation etc.
- Added an extra function in our scripts to capture screens during automated testing of functional workflows to log UI/cosmetic defects which are usually skipped in major functional testing efforts. Scripts can create a separate folder to save the screens which can then be analyzed for logging UI defects.

The table below shows sprint wise statistical figures for manual E2E workflows execution:

Sprint	E2E Workflow#	Locale#	Average execution time of one workflow (in hrs)	Total execution time (in hrs)	Certification Time frame (in days)	Resources required
Sprint-1	1	17	4	68	1	9
Sprint-2	2	17	5	170	1	21

** Average number of QA engineers required in each sprint: 15

**Average execution time of the one workflow in each sprint: 4.5 hrs

Below table represents sprint wise statistical figures for Automated E2E workflows execution:

Sprint	E2E Workflow#	Locale#	Average Execution time of one Workflow (in hrs)	Total execution time (in hrs)	Certification Time frame (in days)	Automation Efforts Required
Sprint-1	1	17	1.5	26	1	3
Sprint-2	2	17	2	68	1	4

** Average number of QA engineers required in each sprint: 4

** Average execution time of the one workflow in each sprint: 2 hrs

From the above statistics, we see that the **average execution time was reduced to 50% and average QA resource requirement was reduced to more than 50% in QA cycles**. In the same way, test data creation efforts can be reduced remarkably using automation scripts. With the help of automation, we can reduce the additional resource allocation as well as turnaround time for test data creation. Going ahead, if a new feature needs to be tested, it can easily be added to the automation script by just modifying the current working script; here again the total man and hardware resource hours saved would be considerable and the ramp up for the new feature can be provided to other resources leading to better utilization of both resources and machines

Client Benefits:

As experts in localization testing, we have been working in this space for over 10 years now. Also, we are the preferred localization partner for several of our clients. Our value adds that we passed on to our client in this project, are as follows:

- Cost reduction in creation of test data and localization functional testing
- Turnaround time reduction for test data creation and localization functional testing for major patch releases
- Resource ramp – up time reduced substantially
- UI testing made easier and cosmetic defects caught without much additional efforts

At QA InfoTech (an ISO 9001:2008, 20000-1:2005, 27001:2005 and CMMI Level III certified company), we specialize in providing independent offshore software testing and, unbiased software quality assurance services to product companies, ranging from the Fortune 500s to start-up companies.

Established in 2003, with less than five testing experts, QA InfoTech has grown leaps and bounds with five QA Centers of Excellence globally; three of which are located in the hub of IT activity in India, Noida, one in Chandigarh, India and the other, our affiliate [QA InfoTech Inc.](#) Michigan USA. In 2010 and 2011, QA InfoTech has been ranked in the top 100 places to work for in India. For more details, please refer to our [blog on this event](#).

"We assure the highest degree of Excellence and Accuracy in our engagements. Once you have placed your trust with us, rest assured we guarantee an elated peace of mind"

- Mukesh Sharma, Founder & Chief Executive Officer

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